

information such as recitations of "best practices", description of service needs, and competitive bids, and facilitation of coalition buying/aggregation of demand, consistent with procurement regulations characteristic of the individual states.<sup>40/</sup>

To avoid the build-up of a large, costly, and self-perpetuating administrative structure, this assistance should be provided by a variety of public and private sector sources. Utilizing the knowledge base of existing organizations would be one way to provide assistance while containing costs. For example, the U.S. Department of Education currently operates six regional technology education centers (RTECs). These RTECs could play a role in helping school districts understand the range of technical options, as well as provide important information about best practices. Through its TIIAP program, NTIA also has a body of knowledge that can be usefully shared with schools and libraries, as does the U.S. Department of Agriculture through its Distance Learning Grants program.

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<sup>40/</sup> The National Association of State Telecommunications Directors (NASTD) urges the Commission to consult with state and local officials before designing an electronic posting system for service descriptions to ensure that procurement codes in the various jurisdictions are not violated. Comments of NASTD at 4, 5. Moreover, we support the Joint Board's endorsement of aggregating demand among consortia as an important means for these institutions to secure discounts as permitted under the Board's plan. See Recommended Decision ¶¶ 593-596.

"Start-up" entities could also contribute valuable assistance without burdening the support fund. As noted in the Recommended Decision, clearinghouses of information as proposed by Information Renaissance and others could be a boon to schools and libraries by facilitating their task of certifying their procurement and deployment plans.<sup>41/</sup> A universal service marketing group of a type similar to that proposed by the California PSC in 1995 or recommended in this proceeding by the Benton Foundation might also prove useful, provided it does not adversely affect the size of the fund.<sup>42/</sup>

We concur with the Joint Board that the fund administrator (which NTIA believes should be selected through a competitive bidding process)<sup>43/</sup> should have a role in facilitating the procurement process.<sup>44/</sup> As distinguished from providing technology assistance or best practices, this role should involve

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<sup>41/</sup> Recommended Decision ¶¶ 599-602.

<sup>42/</sup> See Comments of the Benton Foundation at 3, 4, 5, n.8. See also California Public Service Commission, Decision 96-10-066: Investigation on the Commission's Own Motion into Universal Service and to Comply with the Mandates of Assembly Bill 3643 (Oct. 25, 1996).

<sup>43/</sup> See NTIA Reply Comments, supra note 35, at 29.

<sup>44/</sup> Alternatively, an entity other than the administrator could be chosen to perform this function. Another possibility would be for the administrator to subcontract this function to qualified entities, although the administrator would still be responsible for selection of the subcontractor and overall accountability for the process. Key considerations for whichever entity is selected would be, inter alia, its independence and neutrality, as well as its demonstrated competence.

providing a means for disseminating service descriptions and bid proposals. One advantage of this approach would be the accumulation of data in one database that would help develop comparisons of "lowest corresponding prices" for "similarly situated" non-residential users.<sup>45/</sup>

In essence, multiple sources could provide the technical and informational assistance that schools and libraries will need under the new universal service mechanism, with the administrator focusing on facilitating the actual transactional (*i.e.*, RFP and bidding) functions. All participants ought to understand that whatever system the Commission chooses for the first years of the new universal service system, there will be some features that will eventually be modified or abandoned. The workability and cost effectiveness of any initial approach can and should be refined as experience is gained.

4. State regulators should have primary responsibility for identifying similarly situated schools and libraries

According to the Recommended Decision, carriers should provide services to a school or a library at the "lowest corresponding price," that is, the lowest price charged to similarly situated non-residential customers.<sup>46/</sup>

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<sup>45/</sup> See discussion *infra*. Any comparisons would be made in compliance with applicable Federal and state laws and regulations.

<sup>46/</sup> Recommended Decision ¶¶ 540-541.

This concept poses a complex challenge for purposes of implementation, as illustrated by the concerns expressed by a variety of commenters.<sup>47/</sup> We believe that such a determination can best be made by the individual state public service commissions, which can make factual determinations as to the "lowest corresponding price." The fact-finding methods used can be left to each State. Ideally, school districts and libraries should know the rate to be applied and should not have to bear the burden of challenging a LEC-quoted rate. Under this approach, State commissions would make similarly-situated determinations before any prices are quoted to a school or library. NTIA finds merit in EDLINC's "volume of usage" criterion for distinguishing among non-residential users in developing broad-based "similarly situated" comparisons.<sup>48/</sup> In addition, we would envision that major consultative assistance could be usefully provided to State commissions by State education departments, technology boards, or other State educational entities.

This approach is predicated on NTIA's belief that because State commissions deal with customers daily, they are in the best position to arbitrate this process and to ensure that the prices

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<sup>47/</sup> See, e.g. Comments of the American Library Association at 13-14; Comments of the Brooklyn Public Library at 6-7; Comments of Pacific Telesis Group at 48-50; Comments of the United States Telephone Association at 37-39.

<sup>48/</sup> EDLINC Comments at 8-9.

paid by schools and libraries and the amount drawn from the fund are cost efficient. It would also help ensure that schools and libraries are given the assistance they need to effectively participate in the new universal service system.

5. The Recommended Decision's discount rate structure for the most disadvantaged schools should be revised to reflect better their area cost situations
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The Joint Board has properly articulated a concept whereby all schools and libraries and, especially those that are economically disadvantaged, receive substantial discounts. The Board's matrix of percentage discounts, however, does not consistently fulfill the goal of providing the greatest discounts for those with the greatest need.<sup>49/</sup> More specifically, the matrix fails to accord deeper discounts for those schools in the lowest two tiers of poverty (based on participation in the free or reduced lunch program) that are also located in the highest cost areas. The poorest schools situated in the highest cost areas receive no greater discount than the poorest schools in less costly regions. Furthermore, a low income school or library in a high cost area needs an additional discount because the base prices to which discounts are applied are so much higher than the base prices in lower cost areas. This should be remedied by modifying the two lowest income tiers (varying by area cost) as follows:

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<sup>49/</sup> Recommended Decision ¶ 555.

<u>low cost</u>	<u>mid-cost</u>	<u>highest cost</u>
75%	80%	85%
85%	90%	95%

6. A sound basis for discounting rates must be developed for libraries and private schools

As pointed out by numerous parties,<sup>50/</sup> a systematic means to develop special rates for libraries must be adopted. In terms of a taxonomy based on area costs, libraries should be classified in the same manner as schools. Thus, a "high cost" designation for a school in a given census-based area would also apply to a library. In relation to low-income designations, a given library should be categorized in the same way as the nearest school on the presumption that entities residing in the same area should be like classified. We agree with the American Library Association that U.S. Census data should be examined to determine the most needy areas, and we await the outcome of ALA's ongoing study of libraries in rural and economically disadvantaged areas for the insights it should bring to this proceeding.<sup>51/</sup> Based on the best available empirical data, states ought to be responsible for certifying these areas for purposes of determining eligibility for the appropriate discounts.

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<sup>50/</sup> See, e.g., Comments of Winstar Communications, Inc, at 11-12; Comments of United States Telephone Association at 37-38; Comments of Pacific Telesis Group at 48-49.

<sup>51/</sup> Comments of the American Library Association at 3, 8, 9.

Regarding private schools, classification in terms of high cost support presumably could follow the approach just discussed, that is, private schools in high cost areas must receive high cost discounts. With respect to discounts based on income, the scheme for private schools is, admittedly, more difficult to craft than for their public counterparts. In many cases, private schools do not have the capacity to apply for participation in the free or reduced price lunch program, thereby negating the usefulness of a scheme based on actual subscription. Eligibility for such programs could be used as a surrogate for private schools, however. This approach is attractive because it would be simple to administer, uses an existing and universally accepted basis (the free or reduced price lunch program), and would be equitable. Once eligibility is ascertained, a count would have to be made to calculate the actual number of students affected for a given private school.

7. The Commission must address the applicability of discounted rates and other aspects of the new universal service policy with respect to this nation's tribes

It is our belief that the needs of our Native American tribes require further attention. We agree with the Cheyenne River Sioux Telephone Company that the Commission should strive to ensure that the 187 schools established under tribal authority receive discounted rates, at least comparable to those provided

to other disadvantaged communities.<sup>52/</sup> Telecommunications technology can help to reduce many of the disparities facing the more than 550 tribes, including geographic isolation and significantly higher rates of unemployment, poverty, and high school dropouts. Therefore, we believe that closer examination by the Commission of universal service policies and general telecommunications regulations, as they affect tribes, is warranted in order to ensure that no community in need is left behind.

8. The Joint Board's recommended level of support is not unreasonable

There is no track record for any universal support fund for schools and libraries, so claims that the funding level has been "set too high" have no basis in fact. The level appears to be reasonable, given the goals set by Congress in section 254(h)(1)(b). The Board appropriately recommended that the level be reviewed in the year 2001.<sup>53/</sup>

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<sup>52/</sup> The Bureau of Indian Affairs (BIA) funds 187 schools. Of that total, 82 are operated by the BIA and the remainder are grant schools, funded by the BIA but operated by the tribe or tribal organization. The 187 figure is largely reflected in the statistics provided to the Joint Board by the Department of Education regarding the total number of K-12 schools. There may currently be other schools established by tribes or tribal organizations above and beyond the 187 BIA-funded schools that also should be eligible for discounts.

<sup>53/</sup> Recommended Decision ¶ 556.

9. The Recommended Decision's current trigger point for giving priorities to the most disadvantaged schools and libraries should be lowered and coupled with regular monitoring of the fund

The primary goal for public policymakers in this context should be that every school and library can achieve a basic electronic capability that will assure universal access to the tools of the Information Age.<sup>54/</sup> One substantial concern that the Joint Board mechanism raises is the recommended level of the trigger.<sup>55/</sup> Under the Board's plan, "rules of priority" favoring economically disadvantaged schools and libraries would be invoked once the \$2 billion level is attained.<sup>56/</sup> This would leave \$.25 billion for the remaining poorest entities (determined on the basis of student participation in the free or reduced lunch program). In schools where student participation in the lunch program equals 50 percent or more, almost one-third of all public schools might not benefit from the fund. If a broader definition of economically disadvantaged is used, the proportion of schools that the trigger level would need to accommodate could approach half of all public schools.<sup>57/</sup>

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<sup>54/</sup> See NTIA Further Comments, supra note 35, at 1-9. See also 47 U.S.C. § 706 (requiring Federal and State regulators to encourage deployment of advanced telecommunications capabilities on a reasonable and timely basis to all Americans, and to classrooms in particular).

<sup>55/</sup> See Comments of BellSouth Corporation at 35-37. See generally Comments of NYNEX at 37-39; Comments of Citizens for a Sound Economy at 11-12.

<sup>56/</sup> Recommended Decision ¶ 556.

<sup>57/</sup> Source: U.S. Department of Education.

Because the poorest schools have less access to information or a paucity of expertise, they may be less able to take advantage of available discounts than their wealthier counterparts. This inherent disadvantage, coupled with the fact that the most disadvantaged schools and libraries are a significant segment of the total, the Recommended Decision's trigger is set too high to effectively address the needs of schools and libraries that have not yet utilized the fund.

Clearly, a more realistic trigger is needed, and we would recommend a trip-point no higher than \$1.5 billion initially. To provide greater protection, the fund administrator should also continuously monitor the dispersion of funds to ensure that funds are being distributed equitably at all points in the funding cycle. This will help ensure that serious funding disparities can be identified and remedied before the trigger point is reached. This approach should not create a burden because this data should be available on an on-going basis from the fund administrator.

10. Non-toll Internet access for rural or insular schools or libraries should be explored

We have consistently embraced equitable access as a core principle of universal service and believe that it should be applied specifically to ensure Internet access for those entities that are now inequitably constrained by metered service. The Joint Board's recommendation to permit all schools and libraries

to receive substantial discounts on Internet access -- indeed, all telecommunications services -- represents an important action to help these institutions better able to afford this crucial capability. However, the disparity -- albeit at a lower level -- would remain. Moreover, this recommendation would not directly benefit others, such as households, for which the inequity would still obtain.

Accordingly, we would recommend that where interstate toll is involved with respect to accessing the Internet, the FCC should mitigate the disadvantage. Where the toll link is intrastate in nature, we would urge the individual states to seriously consider ameliorating the toll-charge effect. This should be accomplished through appropriate competition-neutral measures, e.g., where necessary through Federal or state universal service funding, respectively, or -- ideally -- through the entrepreneurial creativity of competing providers.

#### B. Health Care Providers

In an attempt to assist the Joint Board and the FCC with respect to telemedicine issues, we submitted the data collected as a result of a special Telecommunications and Information Infrastructure Assistance Program survey of several rural telemedicine grantees as comments in CC Docket No. 96-45 on December 19, 1996. We have subsequently examined the raw data to identify any meaningful trends or patterns that would be useful

to the Commission. These findings, based on a survey of several TIIAP grant recipients, are presented below in summary form and appear in greater detail in the attached Appendix.

- Participants in the survey have telemedicine networks that serve rural areas.
- A diverse group comprised of private networks, carriers, and cable companies provide the transmission facilities used for telemedicine services.
- Survey respondents currently utilize a variety of bandwidths. None apparently exceeds 1.544 Mbps, the threshold that the FCC's Advisory Committee on Telecommunications and Health Care concluded would be sufficient to support a wide range of telemedicine-related activities.
- Respondents generally believe that they could not reduce the bandwidths that they currently use without harming the effectiveness of health care delivery. Most also agree that use of higher bandwidth would enhance telemedicine care.
- Monthly and non-recurring charges for telemedicine-related transmission services vary among respondents.
- Wide-ranging network applications reflect the differing needs of those in the telemedicine field.
- Most respondents subscribe to e-mail and have Internet access, usually without toll charges.

A general conclusion to the results obtained from this small sample group is that these rural telemedicine and telehealth care providers do not have homogeneous needs or requirements. The uses of their networks are diverse, as is their bandwidth requirements for the transmission facilities. As evident in the results obtained from the survey, the recurring and non-recurring monthly charges for the transmission facilities required to

transmit video, voice, and data over their networks varied significantly.<sup>58/</sup>

Accordingly, these findings should cause policy makers to eschew "one size fits all" policy prescriptions unless compelling reasons warrant a different conclusion. One option that the Commission may want to consider is to allow a particular discounted rate on all recurring and non-recurring charges by telecommunications providers for any level of bandwidth utilized by rural medical entities for the purpose of telemedicine. In selecting the specific percentage of discount -- or matrix of percentages, if tiers are desired to reflect degrees of economic disadvantage analogous to schools and libraries -- the Commission in consultation with the Joint Board should consider such factors, inter alia, as urban-rural "reasonable comparability" (as directed by the Act) and estimated impact on the universal service fund. Another option would be to determine incentives that would aid the diffusion and advancement of telemedicine. For example, policymakers at various levels of government could take actions to encourage users to form buying consortia, which would tend to further reduce health care costs and make more advanced capabilities more affordable.

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<sup>58/</sup> See Appendix. See also Comments of the National Telecommunications and Information Administration to the Public Notice issued by the FCC on November 18, 1996 in CC Docket No. 96-45 (filed December 19, 1996).

VI. CONCLUSION

For the foregoing reasons, NTIA respectfully requests that the Commission adopt the modification to the Joint Board's Recommended Decision contained herein.

Respectfully submitted,

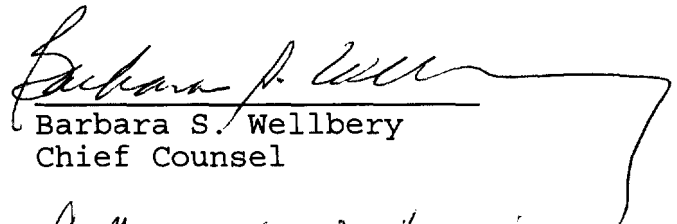
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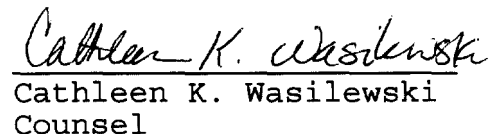
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## APPENDIX

### Survey of Rural Telemedicine TIIAP Grantees

The following represents the findings of an informal survey conducted with several Telecommunications and Information Infrastructure Assistance Program (TIIAP) grant recipients during December 9-17, 1996.

- Participants in the survey have telemedicine networks that serve rural areas.  
Ninety percent of the TIIAP grant recipients who participated in the survey have telemedicine networks located, on average, approximately 100 miles from a city with a population equal to or greater than 5000.
- A diverse group comprised of private networks, carriers, and cable companies provide the transmission facilities used for telemedicine services.  
The findings show that these telemedicine networks utilize a variety of private networks, independent carriers, local exchange carriers, interexchange carriers, and cable companies for the transmission facilities required for the delivery of the health care services.
- Survey respondents currently utilize a variety of bandwidths. None apparently exceeds 1.544 Mbps, the threshold that the FCC's Advisory Committee on Telecommunications and Health Care concluded would be sufficient to support a wide range of telemedicine-related activities.  
The survey reveals that under current conditions, telemedicine users utilize bandwidths of 1.544 Mbps or less. Grantees cited use of dedicated, multiplexed, or fractional 1.544 Mbps transmission facilities. ISDN circuits and the utilization of frame relay services were also noted.
- Respondents generally believe that they could not reduce the bandwidths that they currently use without harming the effectiveness of health care delivery. Most also agree that use of higher bandwidth would enhance telemedicine care.  
The findings regarding the possibility of whether their services could be provided at a lower bandwidth seemed to show that recipients noted minimum transmission standards that they have determined acceptable for the uses required by their network. Most of the comments from the grant recipients stated that reducing the bandwidth of their current networks was unacceptable and would not be adequate for their needs. Most grant recipients seemed to agree that if that higher bandwidth were available for their networks, the results would be positive for the telemedicine industry.

- Monthly and non-recurring charges for telemedicine-related transmission services vary among respondents.  
The findings show that while the level of telecommunications services varied among grant recipients, the monthly and installation costs of the services also differed. Obvious conclusions are that these monthly recurring and non-recurring charges may vary according to such factors as the bandwidth being utilized, the number of sites participating in the network, the distances, the mechanism by which the carrier prices out the service, and whether or not a discount is applied to the tariff.
- Wide-ranging network applications reflect the differing needs of those in the telemedicine field.  
From the responses obtained regarding the uses of telecommunications in the delivery of health care, the findings showed that the applications for the networks vary from real-time interactive video consultation for cardiology, dermatology, speech pathology, psychiatry, to e-mail, continuing medical education courses, and emergency and trauma, etc. One of the factors which may contribute to the wide variety of network usages is that the needs of the community members, medical entities, and organizations involved in the project differ.
- Most respondents subscribe to e-mail and have Internet access, usually without toll charges.  
In terms of e-mail, the findings of the survey show that 80 percent of the recipients have e-mail. The finding also show that 70 percent of the recipients have Internet access. Only 20 percent of the recipients stated that their organizations incurred long-distance charges for Internet access. The limited number of responses to the question regarding the number of hours of Internet use proved inconclusive.